

Claims

1. Rotor, stator, or field coil for use in an electrical motor or generator, a toroid or a toroidal tape core coated with a powder coating, wherein the powder coating is obtained by curing a thermosetting powder coating composition comprising an epoxy-terminated polyoxazolidone resin and a curing agent for the resin.
2. Rotor, stator, field coil, toroid or toroidal tape core according to claim 1 wherein the powder coating composition comprises
30 – 90% by weight of the powder coating composition of an epoxy-terminated polyoxazolidone resin and
0.1 - 40% by weight of the powder coating composition of a curing agent for the resin.
3. Rotor, stator, field coil, toroid or toroidal tape core according to claim 1 wherein the powder coating composition comprises an epoxy-terminated polyoxazolidone resin obtained by reacting an diepoxide with 1,6-hexamethylene diisocyanate, 2,6-hexahydrotolulylene diisocyanate or 4,4'-diphenylmethane diisocyanate.
4. Rotor, stator, field coil, toroid or toroidal tape core according to claim 1 wherein the powder coating composition comprises an epoxy-terminated polyoxazolidone resin obtained by reacting a diisocyanate with a diglycidyl ether of bisphenol A or a diglycidyl ether of novolac.
5. Rotor, stator, field coil, toroid or toroidal tape core according to claim 1 wherein the powder coating composition comprises an epoxy-terminated polyoxazolidone resin obtained by reacting a diisocyanate selected from the group consisting of 1,6-hexamethylene diisocyanate, 2,6-hexahydrotolulylene diisocyanate, and 4,4'-diphenylmethane diisocyanate with a diepoxide selected from the group consisting of a diglycidyl ether of bisphenol A and a diglycidyl ether of novolac.

6. Rotor, stator, field coil, toroid or toroidal tape core according to claim 2 wherein the powder coating composition comprises an epoxy-terminated polyoxazolidone resin obtained by reacting an diepoxide with 1,6-hexamethylene diisocyanate, 2,6-hexahydrotolulylene diisocyanate or 4,4'-diphenylmethane diisocyanate.

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7. Rotor, stator, field coil, toroid or toroidal tape core according to claim 2 wherein the powder coating composition comprises an epoxy-terminated polyoxazolidone resin obtained by reacting a diisocyanate with a diglycidyl ether of bisphenol A or a diglycidyl ether of novolac.

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8. Rotor, stator, field coil, toroid or toroidal tape core according to claim 3 wherein the powder coating composition comprises an epoxy-terminated polyoxazolidone resin obtained by reacting a diisocyanate with a diglycidyl ether of bisphenol A or a diglycidyl ether of novolac.

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9. Rotor, stator, field coil, toroid or toroidal tape core according to claim 6 wherein the powder coating composition comprises an epoxy-terminated polyoxazolidone resin obtained by reacting a diisocyanate with a diglycidyl ether of bisphenol A or a diglycidyl ether of novolac.

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10. Rotor, stator, field coil, toroid or toroidal tape core according to claim 2 wherein the powder coating composition comprises an epoxy-terminated polyoxazolidone resin obtained by reacting a diisocyanate selected from the group consisting of 1,6-hexamethylene diisocyanate, 2,6-hexahydrotolulylene diisocyanate, and 4,4'-diphenylmethane diisocyanate with a diepoxide selected from the group consisting of a diglycidyl ether of bisphenol A and a diglycidyl ether of novolac.

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11. Rotor, stator, field coil, toroid or toroidal tape core according to claim 3 wherein the powder coating composition comprises an epoxy-terminated polyoxazolidone resin obtained by reacting a diisocyanate selected from the group consisting of 1,6-hexamethylene diisocyanate, 2,6-hexahydrotolulylene diisocyanate, and 4,4'-

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diphenylmethane diisocyanate with a diepoxide selected from the group consisting of a diglycidyl ether of bisphenol A and a diglycidyl ether of novolac.

12. Rotor, stator, field coil, toroid or toroidal tape core according to claim 4 wherein the powder coating composition comprises an epoxy-terminated polyoxazolidone resin obtained by reacting a diisocyanate selected from the group consisting of 1,6-hexamethylene diisocyanate, 2,6-hexahydrotoluylene diisocyanate, and 4,4'-diphenylmethane diisocyanate with a diepoxide selected from the group consisting of a diglycidyl ether of bisphenol A and a diglycidyl ether of novolac.

13. Rotor, stator, field coil, toroid or toroidal tape core according to claim 6 wherein the powder coating composition comprises an epoxy-terminated polyoxazolidone resin obtained by reacting a diisocyanate selected from the group consisting of 1,6-hexamethylene diisocyanate, 2,6-hexahydrotoluylene diisocyanate, and 4,4'-diphenylmethane diisocyanate with a diepoxide selected from the group consisting of a diglycidyl ether of bisphenol A and a diglycidyl ether of novolac.

14. Rotor, stator, field coil, toroid or toroidal tape core according to claim 7 wherein the powder coating composition comprises an epoxy-terminated polyoxazolidone resin obtained by reacting a diisocyanate selected from the group consisting of 1,6-hexamethylene diisocyanate, 2,6-hexahydrotoluylene diisocyanate, and 4,4'-diphenylmethane diisocyanate with a diepoxide selected from the group consisting of a diglycidyl ether of bisphenol A and a diglycidyl ether of novolac.

15. Rotor, stator, field coil, toroid or toroidal tape core according to claim 8 wherein the powder coating composition comprises an epoxy-terminated polyoxazolidone resin obtained by reacting a diisocyanate selected from the group consisting of 1,6-hexamethylene diisocyanate, 2,6-hexahydrotoluylene diisocyanate, and 4,4'-diphenylmethane diisocyanate with a diepoxide selected from the group consisting of a diglycidyl ether of bisphenol A and a diglycidyl ether of novolac.

16. Rotor, stator, field coil, toroid or toroidal tape core according to claim 9 wherein the powder coating composition comprises an epoxy-terminated polyoxazolidone resin obtained by reacting a diisocyanate selected from the group consisting of 1,6-hexamethylene diisocyanate, 2,6-hexahydrotolulylene diisocyanate, and 4,4'-
5 diphenylmethane diisocyanate with a diepoxide selected from the group consisting of a diglycidyl ether of bisphenol A and a diglycidyl ether of novolac.

17. Method of using a powder coating composition comprising an epoxy-terminated polyoxazolidone resin and a curing agent for the resin, the method comprising
10 coating a rotor, stator, or field coil in an electrical motor or generator, a toroid or a toroidal tape core with the coating composition.

18. Method according to claim 17 wherein the powder coating composition comprises
15 30 – 90% by weight of the powder coating composition of an epoxy-terminated polyoxazolidone resin and
0.1 - 40% by weight of the powder coating composition of a curing agent for the resin.